

AMENDMENT

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A plasma processing system comprising:
 - a processing container whose inner pressure can be reduced,
 - a first electrode arranged in the processing container, the first electrode being supplied a first high-frequency electric power and a second high-frequency electric power,
 - a process gas supplying part that supplies a process gas into the processing container,
 - a tubular supporting part that supports the first electrode, the tubular supporting part forming ~~an space~~ a space together with a bottom surface of the first electrode such that said space is disposed within the tubular supporting part below the first electrode, and
 - a high-frequency electric power supplying part arranged in the space,wherein the high-frequency electric power supplying part further comprises:
 - a first high-frequency electric power source unit that outputs the first high-frequency electric power having a first frequency, wherein the frequency of the first high-frequency electric power is higher than the frequency of the second high-frequency electric power,
 - a first matching unit for impedance matching of the first high-frequency electric power, wherein the first matching unit is located just under the first electrode,
 - a power supply rod which connects the first electrode to the first matching unit,
 - a second matching unit for impedance matching of the second high-frequency electric power, wherein the second matching unit is located under the first matching unit
 - a coaxial tube which connects the first electrode to the second matching unit, and
 - a transmission line that transmits the first high-frequency electric power from the first high-frequency electric power source unit to the first matching unit, the transmission line being another coaxial tube.

2. (Withdrawn, Previously Presented) A plasma processing unit according to claim 1, wherein the length of the transmission line is shorter than $\lambda/2$, λ being a wavelength of the third harmonic wave of the high-frequency electric power, and with respect to the third harmonic wave of the high-frequency electric power, an output terminal of the high-frequency electric power source and an input terminal of the matching unit are electrically short-circuited ends, respectively.

3. (Previously Presented) A plasma processing system according to claim 1, wherein the transmission line has a length which is shorter than $3\lambda/4$, λ being a wavelength of a third harmonic wave of the first high-frequency electric power, and with respect to the third harmonic wave of the first high-frequency electric power, an output terminal of the high-frequency electric power source is an electrically short-circuited end and an input terminal of the first matching unit is an electrically open end.

4. (Previously Presented) A plasma processing system according to claim 1, wherein the first high-frequency electric power source comprises:
a first high-frequency electric power generating part that generates the first high-frequency electric power when direct-current power is supplied thereto, and
a filter that selectively allows the first high-frequency electric power from the first high-frequency electric power generating part to pass therethrough.

5. (Previously Presented) A plasma processing system according to claim 4, wherein the first high-frequency electric power source further comprises a circulator that allows a forward wave from the first high-frequency electric power generating part to pass therethrough and that absorbs a reflected wave from the first matching unit, between the first high-frequency electric power generating part and the filter.

6. (Canceled)

7. (Previously Presented) A plasma processing system according to claim 1, wherein the first frequency is not less than 70 MHz.

8. (Previously Presented) A plasma processing system according to claim 1, wherein
a second electrode is arranged in the processing container in parallel with and opposed to the first electrode.
9. (Previously Presented) A plasma processing system according to claim 8, wherein
the substrate to be processed is adapted to be placed on the first electrode, and a vent hole is provided in the second electrode to jet out the process gas toward the first electrode.
10. (Canceled)
11. (Currently Amended) A high-frequency electric power supplying apparatus, comprising:
a first high-frequency electric power source unit that outputs first high-frequency electric power having a first frequency,
a first matching unit for impedance matching of the first high-frequency electric power,
a second matching unit for impedance matching of second high-frequency electric power,
wherein the second matching unit is located under the first matching unit, and wherein the frequency of the first high-frequency electric power is higher than a frequency of the second high-frequency electric power, and
a transmission line that transmits the first high-frequency electric power from the first high-frequency electric power source unit to the first matching unit,
wherein:
the high-frequency electric power supplying apparatus is arranged in an space and further arranged for a plasma processing system, the plasma processing system comprising:
a processing container whose inner pressure can be reduced;
a first electrode arranged in the processing container, the first electrode being supplied the first high-frequency electric power and the second high-frequency electric power, the first matching unit being located just under the first electrode,
a process gas supplying apparatus that supplies a process gas into the processing container;
a tubular supporting part that supports the first electrode, the tubular supporting part

forming the space together with a bottom surface of the first electrode such that said space is disposed within the tubular supporting part below the first electrode;

a power supply rod connects the first matching unit to the first electrode;

a coaxial tube connects the second matching unit to the first electrode; and

the transmission line is another coaxial tube.

12. (Withdrawn, Previously Presented) A high-frequency electric power supplying unit according to claim 11, wherein the length of the transmission line is shorter than $\lambda/2$, λ being a wavelength of the third harmonic wave of the high-frequency electric power, and with respect to the third harmonic wave of the high-frequency electric power, an output terminal of the high-frequency electric power source and an input terminal of the matching unit are electrically short-circuited ends, respectively.

13. (Canceled)

14. (Previously Presented) A high-frequency electric power supplying unit according to claim 11, wherein the first high-frequency electric power source comprises:

a first high-frequency electric power generating part that generates the first high-frequency electric power when direct-current power is supplied thereto, and

a filter that selectively allows the first high-frequency electric power from the first high-frequency electric power generating part to pass therethrough.

15. (Previously Presented) A high-frequency electric power supplying apparatus according to claim 14, wherein

the first high-frequency electric power source further comprises a circulator that allows a forward wave from the first high-frequency electric power generating part to pass therethrough and that absorbs a reflected wave from the first matching unit, between the first high-frequency electric power generating part and the filter.

16. (Previously Presented) A high-frequency electric power supplying apparatus according to claim 15,

wherein the first high-frequency electric power generating part is connected via a cable to a direct-current power source that converts alternating-current power of commercial frequency into the direct-current power.

17. (Canceled)

18. (Previously Presented) A high-frequency electric power supplying apparatus according to claim 11, wherein

the first frequency is not less than 70 MHz.

19. (Previously Presented) A plasma processing system according to claim 4, wherein

the filter has an output terminal connected to the transmission line as an electrically short-circuited end with respect to a harmonic wave of the first high-frequency electric power.

20. (Canceled)

21. (Previously Presented) A plasma processing system according to claim 1, wherein

the high-frequency electric power supplying part has three vertically-stacked boxes; and the first high-frequency electric power source, the first matching unit and the second matching unit are contained in the three boxes, respectively.

22. (Previously Presented) A high-frequency electric power supplying apparatus according to claim 14, wherein

the filter has an output terminal connected to the transmission line as an electrically short-circuited end with respect to a harmonic wave of the first high-frequency electric power.

23. (Canceled)

24. (Previously Presented) A high-frequency electric power supplying apparatus according to claim 11, wherein

the high-frequency electric power supplying part has three vertically stacked boxes; and the first high-frequency electric power source, the first matching unit and the second

matching unit are contained in the three boxes, respectively.

25. (Previously Presented) A high-frequency electric power supplying apparatus according to claim 11, wherein

the transmission line has a length which is shorter than $3\lambda/4$, λ being a wavelength of a harmonic wave of the first high-frequency electric power, and

with respect to the third harmonic wave of the first high-frequency electric power, an output terminal of the first high-frequency electric power source is an electrically short-circuited end and an input terminal of the first matching unit is an electrically open end.